

ABSTRACT OF THE DISCLOSURE

A ternary content addressable memory (TCAM) device comprising a plurality of TCAM cells for storing data, each TCAM cell having two memory cells and a comparison circuit for comparing between data stored in the memory cells and data input on a search line pair connected to the comparison circuit, wherein the comparison circuit comprises a first plurality of MOS transistors connected between a match line and a second plurality of MOS transistors, the second plurality of MOS transistors being connected to ground, wherein the first plurality of MOS transistors are gated by signals from the memory cells connected thereto and the second plurality of transistors are gated by signals from a search line pair. The TCAM device includes redundant memory cells which replaces by corresponding column memory cells determined to be defective. Each line of a search line pair is connected to a defective cell is discharged to ground.